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Coping with the Upheavals of Globalization in the Shea Value Chain: The Maintenance and Relevance of Upstream Shea Nut Supply Chain Organization in Western Burkina Faso

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Summary. — Market globalization has had only a weak impact on the regional shea nut supply chain in western Burkina Faso despite the boom in the shea trade and the arrival of leading foreign firms. We show that despite the fact that wholesalers have kept the shea chain locked in an oligarchic organization for the last 50 years, they still play an important role in the smooth functioning of the chain and in profit sharing down the chain to the rural poor. We suggest that development actors should consider shea traders and their role in the coordination of the chain more carefully.

Key words — shea, value chain, globalization, Burkina Faso, Africa

1. INTRODUCTION

Shea trade has experienced huge growth since the early 2000s. During 2000–05, total shea exports increased by 35% in nut weight equivalent (Yinug & Fetzer, 2008). In Burkina Faso, the value of shea nut exports increased threefold during 2000–05 and sevenfold during 2005–12 (data from the General Directorate of Customs—*Direction Générale des Douanes*).

The globalization process has had a major impact on the organization of most tropical agro-value chains, as well as on the power of upstream actors. Globalization is "widely agreed to be a process that transforms economic, political, social and cultural relationships across countries, regions and continents by spreading them more broadly, making them more intense and increasing their velocity" (Hopkins, 2002, p. 16 citing Held, McGrew, Goldblatt, & Perraton, 1999). Structural adjustment programs (SAPs) ended international trade agreements, led to the liberalization of national markets and the privatization of former state monopolies, resulting in the arrival of new actors and the "filamentation of chains" (Gibbon, 2001). As stated by Mather (Fold & Larsen, 2008) "in many export chains, governance has shifted from producers to buyers, with important implications for producers, exporters and farm workers in African countries." European retailers, branded marketers, and international traders, have become more involved in the control of the supply chain (Daviron & Gibbon, 2002; Fold & Larsen, 2008; Gibbon, 2001; Gibbon & Ponte, 2005). Moreover, in the cocoa, coffee, and even banana chains, the 1990s and 2000s were characterized by oversupply and low prices. All of which reduced the power of upstream actors of the chain.

It is difficult to compare the shea value chain with other export-oriented tropical value chains because the latter are mostly plantation crops (coffee, cocoa, banana, flowers, vegetables, etc.), whereas shea is a non-timber forest product. The shea value chain is thus original compared to the global features of agro-food value chains in Africa. In the shea nut value chain in western Burkina Faso, market globalization has had only a weak impact on the restructuring of the regional supply chain despite the boom in the shea trade and the arrival of leading foreign firms. The main impact of globalization of the shea nut value chain has been on prices and volumes. The quality standard, organization, and governance of the value chain have barely been affected.

Following Gereffi, Humphrey, and Sturgeon (2005), we studied the organization of the shea value chain using transaction cost literature. This paper is based on two approaches: the global value chain (GVC) approach (Gereffi & Korzeniewicz, 1994) and the transaction cost theory (Williamson, 1975). A GVC can be defined as "a set of inter-organizational networks clustered around one commodity or product, linking households, enterprises, and states to one another within the world economy" (Gereffi & Korzeniewicz, 1994). The GVC perspective is a way of conceptualizing the forms economic activities take when they are subject to globalization. The GVC literature focuses on the question of governance of the chains, i.e., how they are organized and managed (Gereffi, Humphrey, Kaplinsky, & Sturgeon, 2001). The GVC approach seeks to understand how coordination and control are exercised by some actors in the chain (lead firms) over others (Gibbon & Ponte, 2005; Raikes, Friis Jensen, & Ponte, 2000). The transaction cost literature helps understand the form the governance of the value chain takes by analyzing the complexity of coordination problems facing the chain (Gereffi *et al.*, 2005). Following Rammohan and Sundaresan (2003) and Wardell

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and Fold (2013), we add a historical perspective to the global value chain approach.

We examined the effects of the globalization process on the global value of the shea nut chain. The upstream shea supply chain in Burkina Faso has been maintained by wholesalers for many decades and one goal of the present study was to explain their organization and maintenance of the chain at the regional scale in western Burkina Faso. We demonstrate that the drivers of the organization of the value chain can be found in specific coordination problems of shea trade.

In this article, we focus on the shea value chain and the marketing of raw shea nuts for manufacturers of Cocoa Butter Equivalent (CBE), irrespective of the use of the shea when it is processed abroad (part is sold to cosmetics industries). In West Africa, shea destined for the CBE agri-food value chain represents 90% of shea exports (Lovett, 2004; Yinug & Fetzer, 2008). We do not include artisanal and industrial shea butter processed for cosmetic purposes as this represents only 10% of exports. This chain concerns mainly women's groups who produce shea butter under certification for niche markets in the cosmetic component of the value chain. This chain is most visible outside Burkina Faso. It conveys a positive image of a fair value chain that empowers women. And, as such, it is much better documented than the main chain that accounts for 90% of the shea nut trade. Our choice to focus on the raw shea nut chain enabled us to fill a gap in our knowledge of the functioning of this chain that typically involves a huge number of rural poor in the Sudano-Sahelian region and is crucial for their livelihood (Neumann & Hirsch, 2000; Pouliot, 2012). We demonstrate that wholesalers, despite their oligarchic organization, play an important role in the smooth functioning of the chain and in the sharing of benefits down the chain to the rural poor. We suggest that companies or NGOs dealing with shea should consider the role of wholesalers in the chain and in the empowerment of rural poor more carefully and not try to bypass them in the laudable goal of increasing the benefits for the rural poor with a high risk of excluding some small scale producers, as has been demonstrated in other value chains (Dolan & Humphrey, 2000; Gibbon, 2003).

2. OVERVIEW OF THE GLOBAL SHEA VALUE CHAIN

The shea tree (*Vitellaria paradoxa*) is indigenous to the savannas and dry forests of the Sudanian region. It is found in a 5,000-km-long belt that crosses West Africa (Figure 1). Shea trees are usually not planted but selected, saved, and protected by farmers in their fields (Boffa, 1999; Chevalier, 1946; Lovett & Haq, 2000; Vuillet, 1915). The shea tree is the most frequent parkland tree species in Burkina Faso (Fischer, Kleinn, Fehrmann, Fuchs, & Panferov, 2011). Shea fruit is generally collected by women between May and August, first they pulp the fruit to retrieve the nut, and then boil or smoke the nuts. Dry nuts can be stored for several months before being crushed to release the kernel. International companies are interested only in shea kernels, which they call "shea nuts". In the present work, we also use the term "shea nuts" for "shea kernels". Although the nuts are sold for export, shea butter processed from shea kernels (Elias & Carney, 2007) has traditionally been and still is the main source of lipids in the local diet in rural areas (Crélerot, 1995; Lamien, Sidibé, & Bayala, 1996).

It is estimated that about half the production of shea nuts is traditionally self-consumed in producer countries: between 57% (Lovett, 2004) and 41% (Reynolds, 2010). It is difficult to get a clear picture of this balance. Neither national nor international statistics concerning shea exports and production are reliable. FAO data are based on imprecise national statistics: national statistical monitoring systems fail to deliver comprehensive data for export by road. Nonetheless, it appears that West Africa currently exports between 265,000 and 445,000 tons of shea per year in nut weight equivalent (Yinug & Fetzer, 2008). The main exporters of shea products are Ghana, Burkina Faso, Benin, Côte d'Ivoire, Nigeria, Mali, and Togo (Lovett, 2004; Terpend, 1982). West Africa accounts for 99.8% of total exports of shea. The small remaining share comes from the eastern part of the belt as shown in Figure 1.

The main outlet for shea is CBE industries. Shea butter has similar chemical and physical properties to cocoa butter but costs less. In addition, it is used to help maintain the texture of chocolate, its hardness, "snap" and bright exterior, to prevent the forming of fat bloom, and improve heat resistance (Fold, 2000). CBE industries absorb 90% of total shea exports from West Africa. The cosmetic and pharmaceutical industries absorb the remaining share (Lovett, 2004; Yinug & Fetzer, 2008). The CBE market has undergone huge growth since 2000. Western Europe is the main market for CBE, and the EU decision to allow 5% of CBE in chocolate (Directive 2000/36/CE, application August 3, 2003) has had some impact on the market. However, the growth of the CBE market is mainly driven by new markets such as Eastern Europe, Russia, Brazil, and Oceania (Yinug & Fetzer, 2008). During 2000–05, the global CBE market increased by 29% (Reynolds, 2010; Yinug & Fetzer, 2008). In about the same period, total exports of shea in nut weight equivalent increased by 35% (Yinug & Fetzer, 2008).

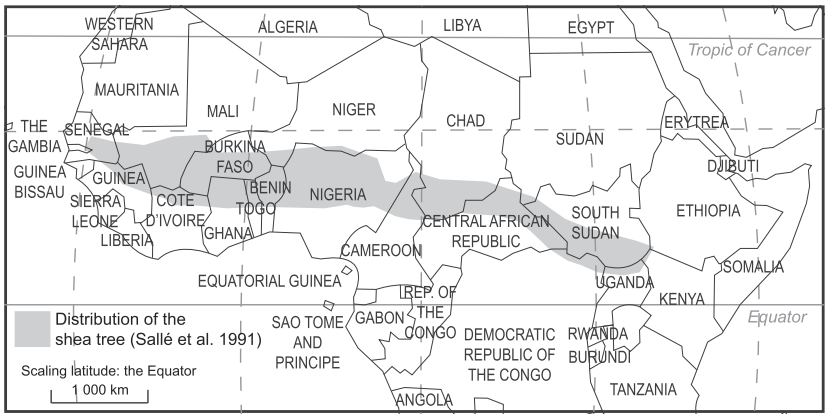

Figure 1. *Map of the shea tree distribution across Africa (Sallé, Boussim, Raynal-Roques, & Brunck, 1991).*

In 2001, 95% of exported shea was in the form of raw nuts. A marginal 5% of shea export was processed into crude shea butter in West Africa. In 2005, approximately 26% of shea export was in the form of crude butter (Yinug & Fetzer, 2008), which rose to 35% in 2010 (Reynolds, 2010). In the meanwhile, IOI Loders Croklaan (the second world exporter of shea) moved from a strategy of shea nut export to a strategy of crude shea butter export from industrial plants in West Africa (see also Figure 5).

Although small compared to CBE, West African exports of shea for cosmetic purposes are estimated to have increased from 200 tons/year in 1994 to 1,500 tons/year in 2003 (Lovett, 2004). Approximately half the supply of shea butter to the cosmetic industries comes from CBE and agri-food industries (Boffa, 1999; Elias & Carney, 2007), thus connecting the two branches of the value chain (Chalfin, 2004).

These major changes in the value chain led to an increase in shea exports as well as to an increase in price. Reynolds (2010) estimated that shea exports increased from 50,000 tons a year in 1994 to 350,000 tons a year in 2008. The export value of shea nuts in Burkina Faso was two billion CFA francs in the early 2000s and reached nearly 10 billion CFA francs in 2012 (Figure 2). In current CFA francs, the price per kilogram paid to the producer in Burkina Faso was seven CFA francs at the end of the 1960s, between 40 and 50 CFA francs in the 1980s, and up to 130 CFA francs in 2003. Prices boomed in 2007 to reach 460 CFA francs. At the end of the marketing year 2013, the price of shea nuts was 250 CFA francs per kilogram.

As a consequence of the expansion of shea markets, exporters adopted strategies to secure their sourcing by establishing branches as close as possible to the field to manage the supply chain and better control key actors. To this end, three main CBE manufacturers, AAK (AarhusKarlshamn AB, Sweden), IOI Loders Croklaan (IOI group, Malaysia), and 3F (Foods Fats and Fertilizers Ltd., India), opened branches in Bobo-Dioulasso (Figure 5) during 2000–05. The choice of Bobo-Dioulasso and the western part of Burkina Faso was motivated by the volume and quality of nuts available in this area. One of the CBE manufacturers we interviewed told us that every year between 50% and 70% of West African shea nut exports come from Burkina Faso, most from western Burkina Faso. Although the supply chain covers the entire shea ecological area, western Burkina Faso appears to be the regional hub for the West African shea market.

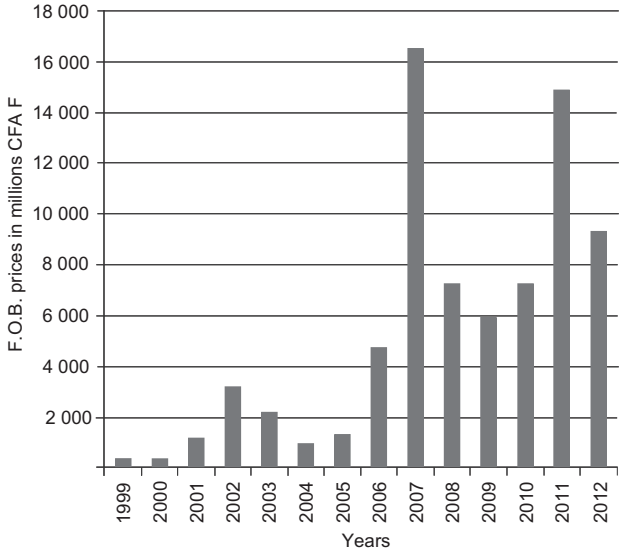

Figure 2. *Export value of shea nuts from Burkina Faso. Sources: FAO and General Directorate of Customs, Burkina Faso.*

3. DATA AND METHODS

As state institutions have failed to monitor the shea value chain, no reliable data on stakeholders involved in the chain were available and random sampling was consequently impossible. Instead we selected informants based on a snowball effect, starting from the top of the pyramid and moving to the bottom to be sure of covering the diversity of actors in the chain (Table 1). We started by interviewing the best known traders in each of the 13 provincial capitals in western Burkina Faso (Figure 3) and asked them to give us the name and contact information of other stakeholders they knew either as partners or competitors. Data were collected at the end of the 2012–13 marketing year. In total, we interviewed 194 traders. Although our panel is not a random sample, we are confident that it is a reasonably accurate representation of the actual range of shea traders.

A brief historical review of the organization of the shea value chain in Burkina Faso was conducted through interviews with former actors in the chain and with retired traders. Available data from government archives were also reviewed. Additional surveys of NGOs, support structures for women's groups, trade associations, and governmental agencies were also conducted.

It proved difficult to obtain shea export figures from CBE manufacturers due to the competition between them and their culture of secrecy. CBE manufacturers consider this to be strategic information. The figures presented in this paper on exports of shea nut by CBE manufacturers and other exporters (Figure 5) are consolidated data from interviews with traders concerning the marketing year 2012–13. We asked traders one level below the exporters how many shea nuts they sold to exporters. As our sampling of this category of traders was exhaustive (they are at the top of the pyramidal trading network), this method provided us with a good proxy for the quantity shea exported by each exporter. This first estimation facilitated dialog with some of the CBE manufacturers who afterward acknowledged that our data were in agreement with their own estimate of market shares in western Burkina Faso.

4. STRUCTURE OF THE VALUE CHAIN IN WESTERN BURKINA FASO

(a) *The pyramidal shea nut supply chain*

The shea value chain in Burkina Faso is a pyramidal supply chain. Shea export for CBE use is controlled by a few big CBE manufacturers in Burkina Faso (see also Figure 5). In 2010,

Table 1. *Distribution of traders interviewed as a function of the volume in tons (V) of shea nuts sold in the marketing year 2012–13 (nine values are missing)*

$V > 20{,}000$ (large exporters)	4	2%
$1{,}500 \leqslant V \leqslant 10{,}000$	19	10%
$800 \leqslant V < 1{,}500$	20	11%
$250 \leqslant V < 800$	25	14%
$100 \leqslant V < 250$	26	14%
$40 < V < 100$	23	13%
$20 \leqslant V \leqslant 40$	22	12%
$V < 20$	44	24%
Total	183	100%

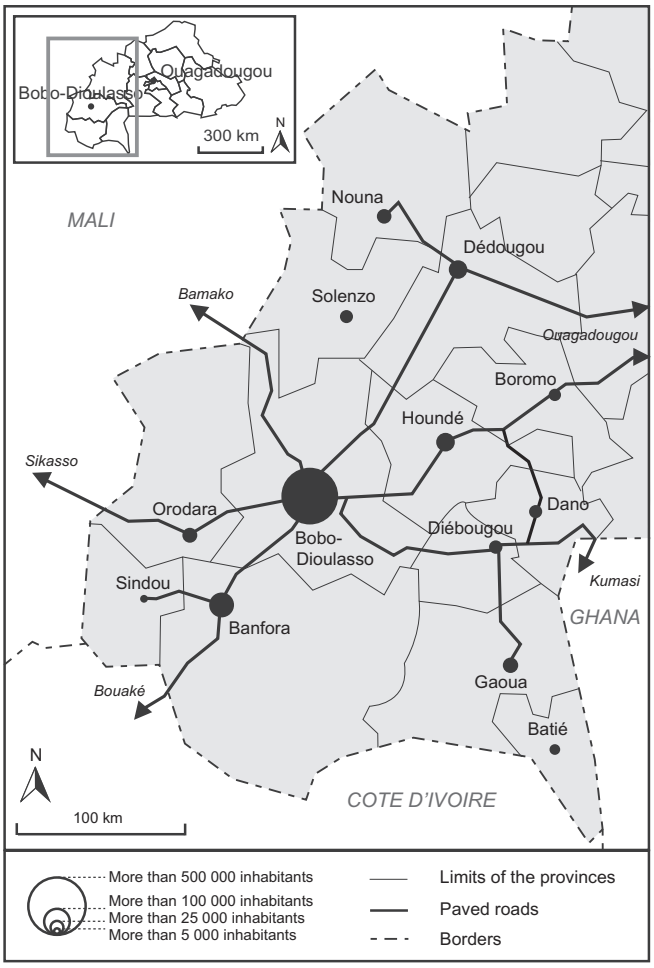

Figure 3. *Map of Western Burkina Faso with the 13 provincial capitals surveyed.*

the three main exporters (AAK, IOI Loders Croklaan, and 3F) accounted for an estimated 95% of the buying market share for export and AAK dominated the market with around 60% of the market share (Reynolds, 2010). This estimate is in agreement with data we collected in western Burkina Faso. Our surveys showed that the three main exporters accounted for 89% of the buying market. The CBE industry is one with high technical and financial barriers of entry that relies on advanced refining and fat-splitting technologies. CBE manufacturers have a culture of secrecy to protect their technological edge in a context of strong competition (Fold, 2000). The three main CBE manufacturers all have similar sourcing systems in western Burkina Faso: they have a contract with and pre-finance wholesalers in Bobo-Dioulasso (2 or 3 for IOI Loders Croklaan, 10 or 15 for AAK and 3F) who are then entitled to purchase shea nuts on their behalf. At the next level down, the wholesalers work with other traders in the pyramidal system: they finance mid-level traders who, in turn, finance small retailers, who buy shea nuts from village collectors. This sourcing system can involve from three to six steps from the collector to the exporter.

Wholesalers are defined here as traders with a sales capacity ranging from 1,000 tons to 5,000 tons of shea nuts per marketing year. They work directly with CBE manufacturers (see wholesalers in Figure 4). According to our interviews, between 10 and 15 of them are located in Bobo-Dioulasso and less than five are located in the other towns in western Burkina Faso. Thanks to the CBE manufacturers, the wholesalers pre-finance between 10 and 50 mid-level traders in Bobo-Dioulasso and in other regional towns in the western part of Burkina Faso (such as Banfora, Gaoua, and Dédougou). Most of them can only source shea in western Burkina Faso, although a few are national in scope.

Mid-level traders can sell from 500 tons to 1,000 tons of shea nuts per year. There are many mid-level traders: between two and 10 in each provincial capital, and many more in Bobo-Dioulasso, where they supply wholesalers. Their purchasing areas cover from one to several provinces but no more than a region. They work with retailers, who are small traders who sell from 20 tons (250 bags) to 500 tons of shea per year. Retailers are numerous. All the shopkeepers in the majority of villages are involved in small scale cereal and shea trading. They work at the provincial scale and buy shea from the '*débrouillés*', small village traders or local farmers who are only involved in shea nuts during the shea marketing period. The '*débrouillés*' source shea directly from the farms or small rural markets. The '*débrouillés*' trade less than 250 bags per marketing year. They work in one or several villages at the municipal scale and cover the countryside and every local periodic market. Periodic markets are held throughout West Africa with varying frequencies usually every 3, 4, or 5 days.

With this pyramidal system, the entire regional territory is covered by traders. During our interviews, which covered the whole of western Burkina Faso, we did not find a single producing area devoid of traders who purchased shea nuts. Most of the wholesalers we interviewed and the majority of the other traders were also actively involved in the cashew nut and sesame trade. Smaller traders at the local scale were also involved in the cereal trade.

The price of shea nuts varies widely over the course of the marketing year and traders do not keep accounts. It is consequently difficult to estimate the gross margin in the value chain. In 2012–13, the price in Bobo-Dioulasso began at 75 CFA francs per kilogram in July 2012 and ended the season at 275 CFA francs per kilogram in April/May 2013. It is also likely that margins vary throughout the year depending on contracts between CBE manufacturers and wholesalers. Table 2 shows two examples of the distribution of gross margins between traders in the pyramidal system. The data provided here are examples of the variation in gross margin we observed among traders and during the course of the marketing year. Despite the variation, margins appear to be quite equitably shared between actors in the chain. The fair distribution of revenues earned by actors in the chain can be seen as a signal of a sustainable value chain (Schaafsma, Burgess, Swetnam, Ngaga, Kerry Turner, & Treue, 2014). As a low-value high-volume market, it is the volume of shea traded that makes the difference in business income.

(b) *The shea value chain and the upheavals of state regulation and globalization*

The pyramidal organization of shea sourcing controlled by wholesalers has not changed much since the colonial period, in contrast to other export-oriented global tropical value chains. It has survived the upheavals associated with both national and global coordination of the value chain in the last 50 years. Four distinct periods can be distinguished in the history of the shea value chain in Burkina Faso from the early 1900s.

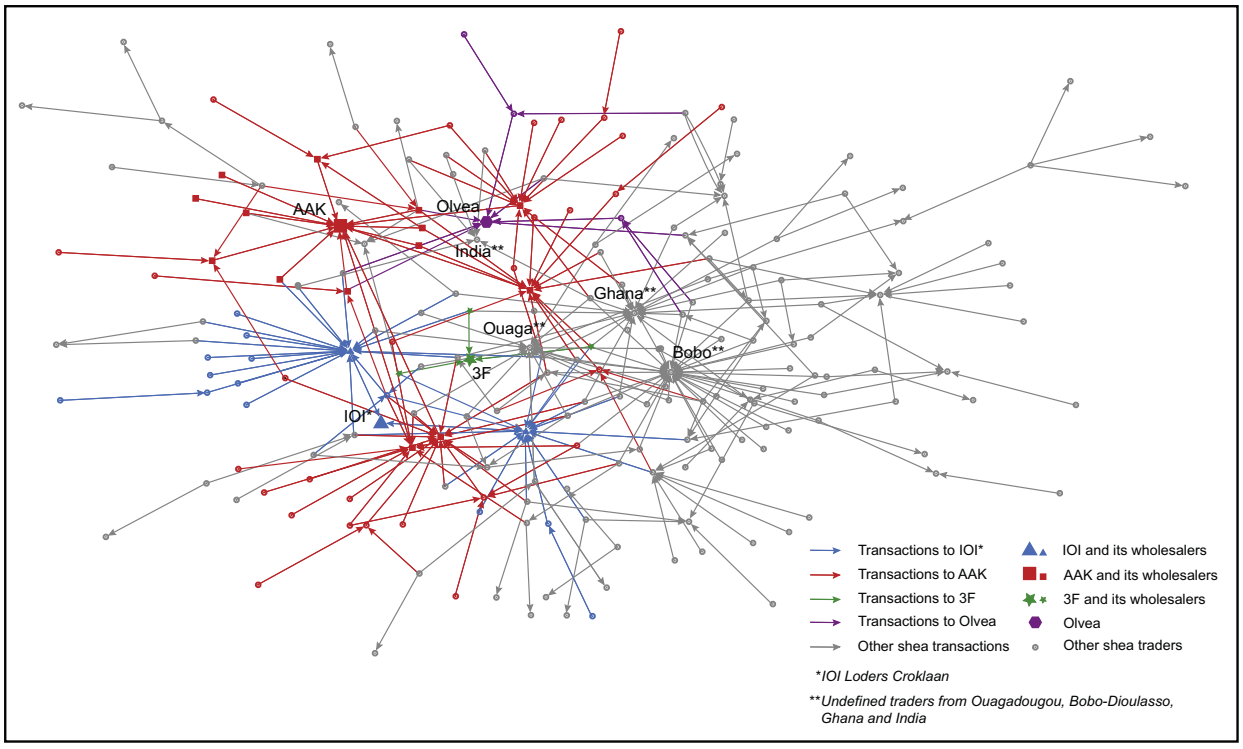

Figure 4. *Shea nut transactions between traders in western Burkina Faso in the marketing year 2012–13. Data were collected during interviews with 194 traders and represent 318 transactions between 215 traders (Source: Author's survey, 2013). (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)*

(i) *1900–56: infancy of the global shea value chain*

French colonies were already exporting shea nuts and shea butter in the early 1900s. By 1910, the Haut–Sénégal–Niger colony had started exporting shelled kernels rather than whole nuts. This improvement led to an increase in kernel exports, from 25 tons in 1910 to 243 tons in 1911 (Perrot, 1915). Margarine manufacturers were the first outlet for shea exports (Péhaut, 1973). In the 1920s, irregularities in consignments and inconsistent product quality hindered expansion of the export market. After the Second World War, the main obstacles—high local consumption of shea, the low price for collectors, and transport difficulties—remained, and shea exports dropped from 1947 to 1958 (Péhaut, 1973).

During this period, colonial trading firms often bartered local products for manufactured goods and salt. This exchange system relied on a hierarchical network of local trade posts working with local traders. CITEC, CFAO, CICA, CFCI, and SCOA were the main colonial trading firms operating in the Republic of Upper-Volta [1] (according to our interviews and to archive data from Burkina Faso [2]). It relied on old regional trading networks. It is probable that the pyramidal system of shea sourcing existed before the colonial era and was supported by colonial trading firms (Wardell & Fold, 2013). During this early period, Voltaic wholesalers were not, however, at the head of the regional chain.

(ii) *1956–84: state regulation*

In 1956, to put an end to marked fluctuations in shea prices French West Africa (AOF) created a price stabilization fund (*caisse de stabilisation des prix*) but low shea production in the late 1950s counteracted these endeavors and the fund was liquidated in 1959 (Péhaut, 1973). In the aftermath of independence, another attempt based on the former Stabilization Fund was made by the new government of the Republic of Upper-Volta to control the shea nut value chain. In 1960, a marketing board (OFCOM, *office de commercialisation des produits*) and in 1964 a stabilization fund (the CSPPA, *Caisse de stabilisation des prix des produits agricoles*) were created. [3] The aim of these parastatal firms was to guarantee maximum exports. [4] In the 1960s and 1970s, OFCOM and CSPPA set the prices to be paid to the producer and the entire costs and margin of traders. They also provided authorization to traders.

The CSPPA supply system relied on the supply organization established by the colonial trading firms. Registered traders working with a hierarchical network of retailers supplied the CSPPA. [5] According to a former CSPPA civil servant who had become a traders' representative, up to 150 traders were authorized by the CSPPA, among whom 15 were able to export large quantities of shea. But despite the country's independence, colonial trading firms were still powerful in the 1960s (OFCOM, 1965). As a result a group of 60 Voltaïc traders joined forces to form the GEX (Group of Exporters, *Groupement des EXportateurs*) with the aim of bypassing colonial trading firms and exporting directly (according to an interview with a former trader who belonged to GEX). New national trade firms supported by foreign firms gradually replaced the former colonial trading firms. By the mid-1970s, colonial trading firms had almost all withdrawn from shea trade in the Republic of Upper Volta. The summit of the pyramidal supply chain in western Upper Volta was subsequently controlled by wholesalers from Bobo-Dioulasso, the origin of the sourcing organization that remains today.

Controlling the supply chain of shea was not an easy task for parastatal organizations. In 1965, OFCOM noticed that many traders were functioning outside its formal authorization system and were paying prices above those they had set

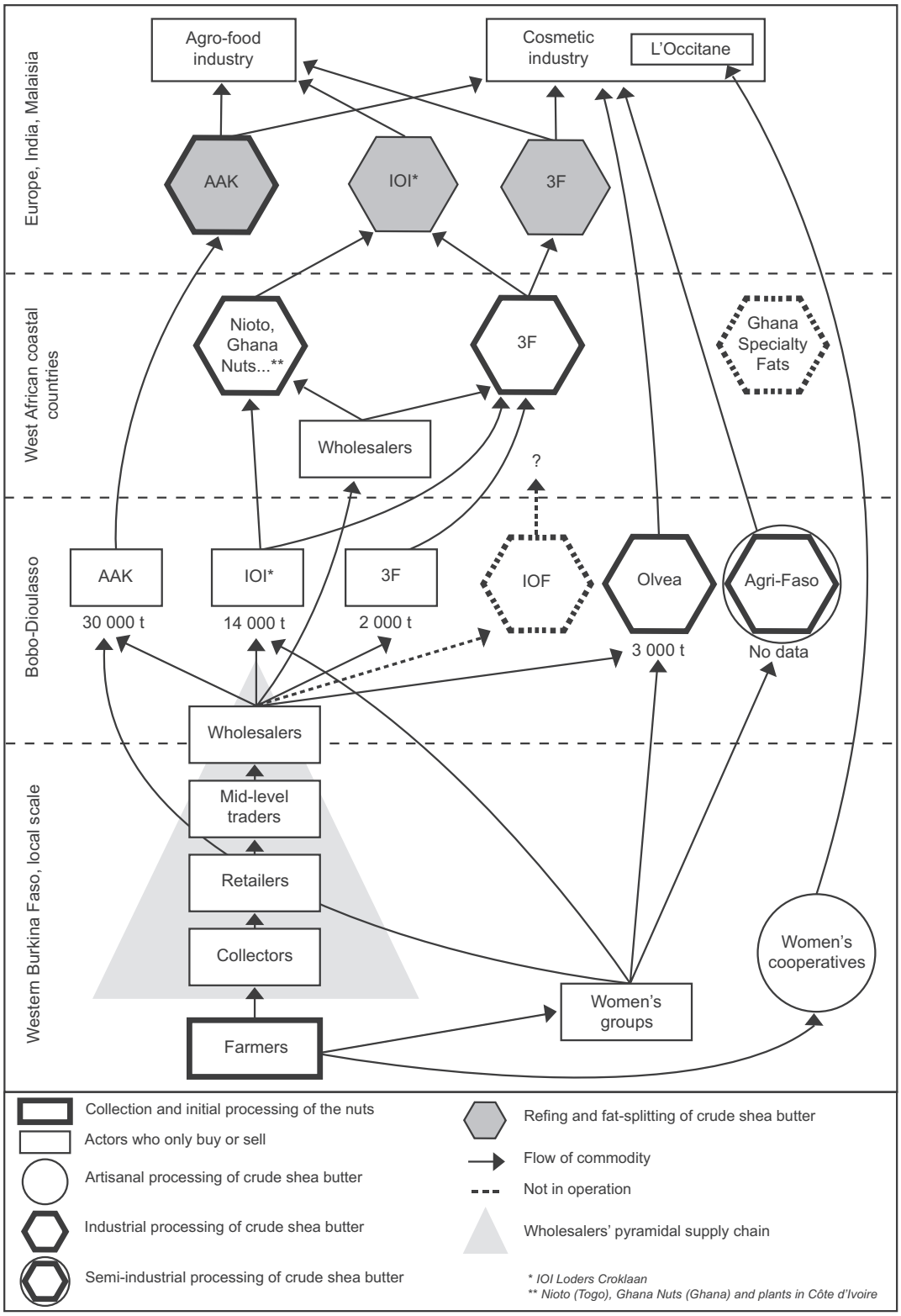

Figure 5. *Shea nut value chain from western Burkina Faso. Volumes of shea nuts are in tons for the marketing year 2012–13. IOF and Ghana Specialty Fats did not process shea in 2012–13. (Source: Author's survey, 2013.)*

(OFCOM, 1965). It was acknowledged that the quality management system had failed. The premium from the bonus/penalty system based on quality criteria remained in the traders' pockets and did not reach producers. Although buying sesame and groundnuts became a parastatal monopoly in 1968, the government chose to let Voltaic traders buy shea directly from the producers.[6] The monopoly of the CSPPA was further weakened in 1974. Traders were allowed to sell their surplus

Table 2. *Two examples of the distribution of the gross margin in the value chain of shea nuts, in CFA francs per kilogram. Source: Authors' survey, 2013*

Actors	1st example, March 2013[a]			2nd example, May–June 2013[b]		
	Purchase price[c]	Sales price[c]	Gross margin	Purchase price	Sales price	Gross margin
Farmer	–	112.50	112.50	–	196.43[d]	196.43
Collector (village)	112.50	125.00	12.50	196.43[d]	214.29[d]	30.95
Retailer (provincial capital)	125.00	140.63	15.63	214.29[d]	235.00	35.00
Mid-level trader (provincial capital/Bobo-Dioulasso)	140.63	155.00	14.38	235.00	250.00	15.00
Middleman (Bobo-Dioulasso)	–	–	–	250.00	255.00	5.00 + 2.5[e]
Wholesaler (Bobo-Dioulasso)	155.00	No data	–	255.00	260.00	5.00

[a] Exchange rate: US$ 1 = 505.11 CFA francs in March 15, 2013.
[b] Exchange rate: US$ 1 = 505.59 CFA francs in May 29, 2013.
[c] Prices in CFA francs per bag have been converted into CFA francs per kilogram (in the region, one bag of shea nuts corresponds to 80 kg of nuts).
[d] Prices in CFA francs per box have been converted into CFA francs per kilogram (one box of shea nuts corresponds to approximately 1.4 kg of nuts).
[e] CBE manufacturers usually give a sales dividend (called "*ristourne*") to their wholesalers at the end of the marketing season, this ranges from 2.5 CFA francs per kilogram to 5 CFA francs per kilogram depending on their total nut sales.

outside the CSPPA once their CSPPA quota had been filled. Traders' representatives also participated in price fixing and in monitoring the marketing activities of the CSPPA.

In the 1960s, cocoa butter equivalents were introduced and spread across the market. Until then, the main buyers had been Aarhus United (Denmark) and Unilever (UK). According to Terpend (1982), this oligopoly locked the shea market in West Africa until the arrival of Japanese firms (Fuji Itoh and Mitsu Bishi) in the early 1960s.[7] During this period, shea exporters in West Africa operated through representatives in the ports of Abidjan, Tema, and Lomé, but not in the Republic of Upper Volta. According to our interviews, they relied on international and regional traders, such as Kagnassy, Kassardjian, and AFRICO, and preferred to pay an additional margin rather than being involved in sourcing themselves.

Finally, CBE manufacturers had great leeway to maintain low prices, even in the period of state monopoly, since state prices were pegged to international prices. The network of traders created by colonial trading firms remained in place after the departure of the firms and the closer intervention of OFCOM and CSPPA. Throughout the 30 years of CSPPA efforts to control the chain, a small number of national and regional traders acquired the power to directly export their products, reinforcing the pyramidal system of supply. The CSPPA failed to control the prices fixed by the wholesalers, or their margins and organization, while the wholesalers took advantage of the funding provided by the CSPPA.

(iii) *1984–2003: the "Sankara crisis" and the liberalization of the shea market*

The drop in cocoa prices in 1983–84 (Fold, 2001) had a negative effect on the CBE market since the CBE was no longer as financially attractive for chocolate manufacturers. As a result, in the second half of the 1980s, trade in shea slowed down. It was in this context that the revolutionary government of Thomas Sankara came to power and, in the hope of changing the rules of the aid and trade games, triggered a huge shea crisis: traders withdrew from the shea trade and no outlet was found for the accumulating stocks of shea nuts. Shea nuts of two or more marketing seasons were mixed and the quality of Burkinabe shea nuts dropped considerably. Sankara's government decided to burn the shea stock to restore international traders' confidence in Burkinabe shea nuts.[8] The government paid for the burnt stock but at low prices, and traders suffered major losses. Confidence was not restored and in the following years the market remained depressed.

The crisis resulted in the bankruptcy of the CSPPA, which stopped buying shea nuts. The state regulation of the shea value chain collapsed six years before official liberalization. According to our interviews with traders, the shea crisis at this period had at least three effects on the national value chain:

- new wholesalers, but with the new ones coming from the same families: with their losses, some stopped, others handed over their businesses to the next generation in their families;
- disorganization of the supply chain: with the depressed market for shea nuts, Burkinabe traders had difficulty reaching exporters and attempts at smuggling shea were unsuccessful;
- traders diversified toward sesame and, to a lesser extent, cashew nuts; hence, the relative importance of shea in the regional trader's activities decreased.

Two international traders, Olam and Kagnassy (L'Aiglon Holding SA), entered the fray offered by the liberalization process and the disorganization of the value chain. According to a former Olam manager in Burkina Faso, Olam managed to become a key trader between regional and national wholesalers and the (then) final buyers, that is to say Loders (Unilever group), Karlshamn AB, Aarhus United and Fuji.[9] Olam, and to a lesser extent Kagnassy, leveraged the situation with high margins until 2003. Olam and Kagnassy relied on the same pyramidal system used by CSPPA and the colonial firms. The wholesalers' sourcing system recovered from the crisis with the arrival of Olam and Kagnassy, who relied on the system to source shea.

(iv) *2003–present: involvement of CBE manufacturers in sourcing activities*

The CBE market has experienced huge growth since the early 2000s. Exporters set up in the shea-producing region, particularly in western Burkina Faso with the desire to reduce the number of middlemen in the chain and the traders' margin. They also sought to better control the supply. According to Fold (2000), CBE manufacturers wanted to maximize performance of the sourcing of shea because the margins of their other activities had been reduced. According to our interviews, they apparently noticed that the market was not as sensitive to price fluctuations as they thought it should be. Increasing the price was not synonymous with increased amounts of shea nuts sold because traders in the first stages of the chain, the wholesalers, kept the increase for themselves. As the increase in price did not reach the farmers, it was not an incentive for them to collect more shea nuts. To acquire better control

of the market, CBE manufacturers set up in West Africa. They deposed Olam and worked directly with national and regional wholesalers.

Instead of decreasing the size of the pyramid to better control production quality and prices, as they had expected upon arrival, CBE manufacturers strengthened the pyramidal network controlled by the wholesalers. With the increase in the price of shea nuts and the arrival of several CBE manufacturers, many new actors entered the shea nut value chain. Ghanaian and Indian traders came to Burkina Faso to smuggle or simply to buy shea nuts without formal contractual agreements. The changing context and the new rule of trade with CBE manufacturers upset long-established shea traders. Margins in the shea trade changed. According to a trader who began to trade shea nuts in the 1970s, margins have decreased from 15% to 3–4% while the amount of shea traded has increased. As a consequence, the wholesalers' network of traders became less stable since wholesalers were working with new traders but trusted them less. The arrival of CBE manufacturers reshuffled the hierarchical order between wholesalers. Some long-standing traders were edged out but others managed to continue under these new conditions. CBE manufacturers mainly strengthened the vantage point of wholesalers who were already working directly with international traders (Olam, Kagnassy) but they also empowered some other wholesalers. Nevertheless, the wholesalers who now enjoy a privileged position in the supply chain are not newcomers. They belong to old regional traders' families who used to work with powerful wholesalers, but at a lower level. Finally, the pyramidal supply chain of shea survived the upheaval of shea globalization. The same organization of sourcing controlled by wholesalers in Bobo-Dioulasso during the colonial period continues today.

(c) *New positioning of wholesalers and CBE manufacturers*

Based on our interviews with exporters, IOI Loders Croklaan and AAK [10] have tried to bypass wholesalers and the multi-level middlemen in their system and work directly with women's groups. In the direct procurement systems implemented by the two firms, the stated objectives are to ensure higher prices to collectors, to avoid speculation and to control quality and traceability. At the same time, purchasing nuts directly from women is viewed as a cost-reduction opportunity for exporters. Direct sourcing is intended by CBE manufacturers to be a win–win situation: women would receive a higher price for shea (pocketing part of the former middlemen's margin) and exporters would pay less than the wholesaler's price since the total margin was reduced. Other incentives have led CBE manufacturers to set up an alternative shea supply. It appears that AAK is doing so to fulfill its own standards or the private standards of specific customers in the cosmetics industry. It does not appear that IOI Loders Croklaan's decision to work with women's groups and oblige its wholesalers do so, is in response to customers' requirements. Rather, they may want to ensure their own sustainability (corporate social responsibility) which is an implicit but critical requirement to work with large agri-food industries. Still, despite our limited access to the CBE manufacturers' strategy, we are in a position to state that the two systems of direct sourcing likely account for only a small amount of shea compared to the "classic" system, perhaps no more than 5% or 10% of their total purchase of shea nuts in western Burkina Faso. Our fieldwork leads us to conclude that CBE manufacturers cannot obtain better final prices for shea through their direct sourcing than those offered by wholesalers, although they may be able to purchase better quality shea nuts. Women's groups seek a premium price for getting involved in alternative marketing systems. Moreover, in this supply system, CBE manufacturers have additional costs of leadership, management, and logistics. In light of this information, it appears that direct supply is costly and not very efficient. To date no exporters have succeeded in buying large amounts of shea through this system and still rely to a great extent on the wholesalers' supply chain.

Wholesalers still take advantage of their relationships with global exporters, as it is the only way to gain access to funding, although they try not to become captives of this system. Wholesalers and their networks can bypass exporters. As can be seen in Figure 4 most of the traders work with several buyers. Shea traders speculate on shea using stocks they purchased with their own capital. They also manage to sell shea on the "black market" (*le marché noir*, which in this case is not illegal trade, but refers to trade without a contract), which pays a better price. They smuggle shea into Ghana where prices are higher. It is likely that wholesalers are not in an exclusive relationship with CBE manufacturers despite the efforts of CBE manufacturers.

Finally, although CBE manufacturers maintain exclusive control over shea nut outlets and have bypassed international traders acting as middlemen in order to ensure hands-on management of the supply chain, wholesalers have succeeded in maintaining their position as unavoidable key players in the shea supply chain at the regional scale. Like colonial traders and the state marketing board after them, CBE manufacturers have been forced to rely on this oligarchy of wholesalers and their networks, despite their claims that their arrival in Bobo-Dioulasso gives them better control of the trade and of funding flows to the rural poor.

5. ANALYZING THE CONTINUITY OF THE WHOLESALERS' SUPPLY SYSTEM

How have wholesalers been able to maintain their position over time? We contend that wholesalers control the specificity of the shea value chain in western Burkina Faso. The organization they built has solved coordination problems in the shea chain in an efficient way to enable them to maintain their position in the value chain.

(a) *Coordination problems and transaction costs of the shea nut supply chain*

To analyze the organization of the shea chain and its coordination issues, we examined the transaction costs of the chain with the aim of (i) identifying the specificity of the existing value chain and (ii) comparing these costs with those of possible alternative shea chains. We define transaction costs as "the resource costs of maintaining and operating the institutional framework associated with capturing the gains from trade" (Allen, 2000; Wallis & North, 1986). Transaction costs vary depending on the uncertainty of the transaction, the frequency of the transaction, and asset specificity, i.e., investments that are specific to the product (Williamson, 1979). The latter is critical: the more specific the asset, the more the buyer is locked into the transaction through specific investments (Williamson, 1981). Transaction costs also arise from coordination problems, defined as the problem of integrating the separate efforts of many individuals (Grant, 2002).

(i) *Characterizing transaction costs in the shea value chain*

As observed by Barrett (1997) and Fafchamps and Minten (2001), coordination problems and hence transaction costs are high in agricultural trade in Africa. The smallholder cropping system is characterized by atomicity of supply, small transactions, the long distances between sellers and buyers—compounded by poor quality roads—, and the difficulties of enforcing formal contracts with smallholders. The shea nut chain shares similar features. Shea production mainly belongs to the peasant economy. In the shea production area in Burkina Faso, virtually every rural household can collect and sell shea. A recent survey in two rural shea-producing areas showed that 94% of households collect shea nuts and 59% sell them (Pouliot, 2012). Research in Mali has also demonstrated the significance of shea nuts to household incomes controlled by women representing more than half of all incomes (Becker, 2001). In contrast to cocoa or coffee growers, shea collectors are not well organized. Groups are mainly women who simply join forces to process and sell shea butter or soap. Collecting and selling raw nuts is still conducted by individuals or families, predominantly by women. This distinctive feature of the shea production system is a serious challenge for the supply chain: to meet the logistic challenges of bundling atomized production across large rural areas.

Another huge coordination problem that is specific to the shea value chain is the variability of shea production. The year-to-year yield of shea trees is irregular (Desmarest, 1958). In the same year, production can be unevenly distributed between areas. Traders have to be able to source shea yearly in different areas depending on production.

The pyramidal supply chain is designed to tackle these problems of producer atomicity and yield variability: the system allows shea nuts from large areas to be bundled, each trader bundles the shea at his/her own level. In light of our interviews, it is likely that local traders represent several thousand people and that, through the pyramidal system, shea can be sourced almost everywhere. However, to be fully operational, this supply system requires cash. Traders cannot wait to be paid. They have to buy shea throughout the marketing period with no interruption due to the volume of the shea market. The pre-financing system works only if any risk of mistrust in the network can be overcome. The risk of mistrust thus represents another major coordination problem.

The need for local knowledge of units of sale is also a coordination problem that is specific to the shea chain (Fold, 2008, p. 114). Shea nuts are primarily bought in volume units: boxes, '*yoruba*' or '*cocotassa*', depending on the region. When the transactions take place in provincial towns, traders usually buy shea by the kilogram. Traders must have a good knowledge of volume equivalents in weight as their margin relies on this knowledge. In addition, shea nuts lose weight while drying. At the beginning of the marketing period they are still moist, but they can lose up to 20% of their weight during drying. Traders must also be able to judge the quality of the nuts to adjust the price they pay based on the moisture content of the product.

According to Laan (1993), shea nuts represent an "entire channel crop". "Entire channel crop" is a trans-oceanic export crop that has no well-organized global market and only a quasi price, that is to say, only retrospective prices. This system can be contrasted with the "half-channel crop", which is a trans-oceanic export crop divided between auction crops (tea, tobacco, etc.) and exchange crops (cocoa, coffee, etc.), which have price quotations and well-organized global markets. In a half-channel crop, exporters do not need to control the entire chain. They can rely on market institutions to buy crops (Laan, 1993). Entire channel crops involve more transaction costs than half-channel crops because the supply chain to be controlled and managed is longer.

To sum up, the shea value chain is characterized by high transaction costs. Even if asset specificity is low (raw nuts, no need for high specific investment), shea nut transactions are highly uncertain (no global market, high yield variability, and risk of mistrust) and distinguished by their high frequency (atomicity of producers and small transactions).

(ii) *Examining alternative organizations of the shea nut chain*

To compare two alternative organizations with the existing chain, we investigated vertical integration and direct purchase in order. Direct control of production, which exists in the banana value chain where exporters are involved in production in a vertical integration model (Laan, 1993; Vagneron & Roquigny, 2011), is neither realistic nor likely to be profitable. There are no shea plantations in existing agrarian systems. Although shea plantations are technically possible, shea seeds are recalcitrant and the shea tree is a slow-growing tree with highly variable yields. Under natural conditions, the tree begins to bear at age 20, and full production is reached at age 40 or 50 (Sanou *et al.*, 2004). This is a major disincentive for farmers to plant it. Grafting can make trees fruit younger but it has not yet been applied at a large scale (Sanou *et al.*, 2004) and requires plantlets that will often have to survive high livestock pressure. Another critical factor is the complex bundle of rights to shea trees as distinct from rights to the land on which shea trees grow (Fortmann, 1985). In Burkina Faso, rights to shea trees and to land are distinct but intertwined. Access to shea fruits may be open to some extent in bushes and fallows; in the cultivated area, it may be shared between the landowner and the farmer who has use of the land or restricted to the landowner (Augusseau, Nikiéma, & Torquebiau, 2006; Elias, 2010). Pressure on shea harvesting triggers change in access to shea toward more restriction to some social groups and especially migrants (Benjaminsen, 2002; Elias, 2010). As establishing plantations of shea trees may require new institutional tenure arrangements (Berry, 1988), planting shea is not yet part of existing agrarian systems; it raises problem of land tenure and involves the question of social justice. For all these reasons, it would be expensive and risky for CBE manufacturers to invest in shea plantations in the present conditions. It would lock them into the shea business for a long period of time whereas shea profitability depends upon the (more) volatile cocoa butter market (Fold, 2008, p. 111).

Direct procurement of shea nuts from small-scale farmers is another possible alternative. As discussed above (Section 4(c)), the direct supply of shea is relatively costly and inefficient. GVC analyses have shown that the trend toward a buyer-driven global value chain appears with higher quality standards, timeframes for delivery, volumes, and perhaps also social and environmental certification and more control of the supply chain, either by vertical integration or by direct procurement (Fold & Larsen, 2008; Gibbon & Ponte, 2005; Riisgaard, 2009). This change in the organization of the supply chain has already been reported, for instance, in fresh produce value chains in East Africa (Barrientos, Dolan, & Tallontire, 2003; Dolan & Humphrey, 2000; Jensen, 2008), the palm oil chain in Ghana (Fold, 2008), the global coffee chain (Ponte, 2001), and the citrus value chain in South Africa (Mather & Greenberg, 2003). Quality monitoring and private standards are key factors in the restructuring of the chains. Since 2008, AAK has started to trade in Green Palm Certificates linked to RSPO, although shea continues to remain outside all such

voluntary certification systems. Moreover, in the agri-food shea chain, quality is not an issue. CBE manufacturers interviewed in West Africa stated that quality of raw nuts is not critical for their industry and that there is no advantage in paying a premium for top quality shea nuts. Current quality is sufficient: traders have minimum quality requirements (6–8% moisture, 5–8% free fatty acid, 47–48% oil content) and CBE manufacturers use advanced technology to deal with low-quality nuts. CBE manufacturers are trying to develop direct procurement mainly for the cosmetics industry where some strict standards apply although this segment represents less than 10% of the global shea trade.

Alternatives to the pyramidal supply chain controlled by wholesalers are thus costly and risky under present conditions, given the specificity of the production structure of shea nuts and the market requirements of CBE manufacturers.

(b) *Wholesalers successfully tackle coordination problems*

In contrast, the network trading developed by wholesalers satisfactorily solves the problem of coordination in the shea chain and lowers the transaction costs. This probably explains their long-standing key position in the shea value chain in western Burkina Faso. Coordination problems are tackled by wholesalers through the market institution they have built: network trading. The network appears to be their best asset to control their numerous suppliers and deal with the risk of mistrust. Trust is a powerful way to prevent free-riding, to reduce uncertainty, and to establish common values and shared goals between partners (Ménard, 2010, p. 33–34). To ensure relations based on trust their trade networks are based on relatives and distant kinships. Kinship networks are an essential resource since they enable wholesalers to control a large number of traders. As one trader put it: "it is the strength of the network that makes a trader powerful." Younger brothers, sons, cousins, or other relatives are sent to rural towns to manage local networks. They provide pre-financing to local traders, obtain the corresponding amount of shea and convey it to the parent company in Bobo-Dioulasso. It is very likely that traders prefer to rely on other traders of the same geographical origin. Table 3 shows that autochthones are more likely to trade smaller volumes of shea than Mossi traders, who are considered to be migrants. They may think that other Mossi traders will act according to shared cultural rules. Moreover, Mossi shea traders share the same religion, Islam. It is likely that sharing Islam is another safeguard for traders, religion acting as a trade code of ethics (Grégoire & Labazée, 1993; Lambert & Egg, 1994). The social homogamy of traders may also be explained by the way traders are renewed: through co-optation and nepotism within the networks of traders, as shown by Fafchamps (2001).

The age of the network is another factor that helps avoid mistrust between traders. Old networks are stronger because they have been tried and tested over time. Traders who could not be trusted have been rejected. Traders' relatives are strongly rooted in local areas. Old networks are an important asset for wholesalers. The inheritance of the shea trade and trade network is made possible by training young men in the family. They learn the job "in the field" by purchasing nuts at the base of the pyramid. Then, more experienced men begin to manage small local supply networks before being entitled to set up independent businesses and possibly inherit the parental trading company. Table 3 also shows that traders who inherit the trading network from their families are likely to have a larger trading capacity than new traders. This result is in agreement with that of Fafchamps and Minten (2001), who showed that traders' social capital has a positive influence on trader performance by reducing transaction costs.

In addition, it appears that stronger networks are also based on territorial links. Traders have better control over their home district, where they are well known, even in the case of Mossi traders. They are still viewed as migrants even two or three generations after settling in the western part of Burkina Faso. As a trader told us "if you go to your home village, traders will prefer to sell shea nuts to you rather than to foreigners, for the same price." Network trading is thus an efficient way of dealing with a major coordination problem, the risk of mistrust in the pre-financing operation.

The organization of the trade gives traders another advantage, which, as mentioned above, is learning by doing. This type of training allows the transfer of "tacit knowledge" (Pecqueur, 2006; Polanyi, 1967). This means their trade skills and knowledge are not learned from books or at school, but rather through learning by doing. In order to transfer tacit knowledge, inter-firm relationships are crucial, or, in our case, intra-family trade relationships (Giuliani, Pietrobelli, & Rabellotti, 2005). Our interviews showed that it is not unusual for even an experienced wholesaler to suffer a loss in certain transactions. Wholesalers contend that a minimum of three years' training is needed to understand how the shea market works. Young traders learn how to convert a price in volume into a price in weight by doing it, to know how a market price develops and when prices become remunerative depending on moisture content and anticipated weight loss, how to judge transport costs, and how to set incentive commissions for lower traders. Hence, wholesalers reduce the importance of another coordination problem, the lack of information on quantity, quality, and prices of shea nuts, by establishing a

Table 3. *Descriptive statistics, traders of shea nuts in western Burkina Faso, marketing year 2012–13 Source: Author's survey, 2013*

Distribution of traders according to the volume (V) of shea nuts in tons for the marketing year 2012–2013, and origin—154 traders, Pearson's Chi-squared test: χ-squared = 6.3326, df = 2, p-value = 0.04216				
	$0 < V < 40$ (%)	$44 < V < 245$ (%)	$V > 250$ (%)	Total (%)
Autochthones	49	30	21	100
Migrants	32	30	38	100
Total	37	30	33	100
Distribution of the traders according to the volume (V) of shea nuts in tons for the marketing year 2012–13, and type of network (inherited or not)—116 traders, Pearson's Chi-squared test: χ-squared = 7.9725, df = 2, p-value = 0.01857				
Old network	24	34	42	100
New trader	50	23	28	100
Total	33	30	37	100

common language and knowledge between traders (Lorenzen & Foss, 2003).

Large networks throughout western Burkina Faso make it possible for wholesalers to purchase shea nuts where the yield is high. In the early stages of the season, they use their young relatives in the field and the traders in their network to identify areas where the yield is expected to be high and then focus their efforts on these areas.

The organizational structures of West and East African grain value chains are similar to those of shea (Galtier, 2002; Lambert & Egg, 1994; Sitko & Jayne, 2014). The efficiency of the organization of transactions, such as network trading within the shea value chain, must be assessed with respect to the coordination problems it overcomes (Galtier, 2002; Gereffi *et al.*, 2005). Network trading, as developed by wholesalers, appears to be the most efficient institution for the shea trade and similar trades today.

(c) *Horizontal organization of shea traders*

Cooperation among wholesalers (at the top of the pyramid) makes it possible to maintain wholesaler supply chain organization. Tacit knowledge acts as a rule for cooperation within the group and thus prevents opportunistic behavior (Lorenzen & Foss, 2003). Wholesalers use tacit knowledge as a smooth barrier to entry into the cluster. It also enables them to develop horizontal cooperation among themselves. They are organized in trade organizations more or less according to their final buyers (AAK vs. IOI Loders Croklaan) and in federations at the national level (TFK—*Table Filière Karité*). Through the TFK, they lobby the government and CBE manufacturers. They recently lobbied to stop foreign traders from buying shea at the farm-gate level. This effort has, up to now, remained unsuccessful. They are also trying to get the TKF recognized as an *interprofession*, that is to say, the only professional organization of the shea value chain recognized by the State and entitled to create and collect a tax linked to the shea trade. They are also capable of setting prices among themselves to ensure their margins. For example, in August 2013, they blocked an increase in prices. CBE manufacturers had not increased their purchasing prices and at the local level farmers wanted to sell at higher prices. Wholesalers found themselves in the difficult position of facing reduced margins. They agreed on a lower purchasing price. Their horizontal coordination is thus part of their strength. It appears to be an efficient way of socially reproducing the wholesalers' dominant position within the shea nut supply chain in western Burkina Faso.

6. DISCUSSION: STABILITY OF THE WHOLESALERS' SUPPLY SYSTEM

(a) *Vertical coordination of the shea value chain*

The vertical coordination of the shea value chain is complex and unique. Vertical coordination appears when the transaction costs are too high for market-controlled coordination and too low for vertical integration (Humphrey & Schmitz, 2001). Shea nut transactions are mostly conducted through contracts between CBE manufacturers and selected wholesalers and through network trading between traders. As for other value chain analysis (Ivarsson & Alvstam, 2010), the shea value chain does not fall obviously in one of the types of governance developed in the GVC literature. Nevertheless, the typology defined by Gereffi *et al.* (2005) helps to understand the vertical coordination of the shea value chain. It is situated between the relational value chain and the captive value chain. The shea value chain can be seen as a network built up over time, based on complex interactions and trust, with some mutual dependence between buyers and sellers, as in the relational value chain. Yet, suppliers are also dependant on larger buyers, the CBE manufacturers, as in the captive value chain type of vertical coordination. Shea traders and CBE manufacturers are situated between mutual dependence and a leader–captive relationship. Although CBE manufacturers set up contract with suppliers and define quantities and prices, shea traders are unavoidable because they control the up-stream supply chain. As stressed by Morris and Staritz (2014) in the apparel industry in Madagascar, the local embeddedness of the shea GVC matters when analyzing its distinctive features. Despite the attempt by the CBE manufacturers to introduce strong vertical coordination, local wholesalers have been able to maintain their position and to keep some power in their relations with CBE manufacturers.

(b) *Stability of wholesalers' supply system*

The reason for the resilience of the wholesalers' supply chain over time is twofold: their strong and efficient coordination and the absence of satisfactory alternatives.

First, wholesalers and their networks appear to play a useful role in the shea value chain. In spite of their limited role in speculation, each trader has a useful function in the chain in collecting and bundling shea nuts and thus creating added value at local and regional levels. Sharing fair margins may be seen as supporting evidence for the relevance of the wholesalers' supply network. Their relevance and their usefulness in the chain have certainly helped them to maintain their position. Up to now, they have solved the coordination problems of the chain efficiently enough to maintain their power over the supply chain. Our results show that it may have been the high transaction costs of the shea value chain that allowed the wholesalers to control the supply chain.

The wholesalers' strategy, their skills, and their distinctive features, i.e. involving their family and maintaining territorial links, facilitated the development of a horizontal organization very similar to clusters (Mccormick, 1999; Porter, 2000). Shea traders are long-standing traders in Bobo-Dioulasso, which has been a regional hub for the shea trade since before colonial times. Most shea wholesalers (51% of traders we interviewed in Bobo-Dioulasso) are settled in a Bobo-Dioulasso neighborhood named "diaradougou". An even closer resemblance to clusters can be seen if, like Pecqueur (2006), we consider that clusters value hidden resources linked to spatial particularities and human groups: more than capital, work, or raw materials, clusters value a local culture, cognitive learning, and training. As we have seen, cognitive coordination is one of the strategic assets wholesalers use to reinforce trust and information sharing among themselves. Figure 4 shows that traders cooperate horizontally. The networks of transactions are intertwined. According to Lorenzen and Foss (2003), clusters facilitate vertical and horizontal coordination, thereby explaining the longevity of wholesaler supply systems. This double organization appears to be a successful local means for the regional supply system to cope with globalization processes.

The second explanation for the wholesalers' control of the supply chain could be the failure of the alternative supply solutions tried by CBE manufacturers, or the lack of new alternatives. As demonstrated, vertical integration is neither realistic nor would it be profitable. Quality requirements for shea nut transactions are low and voluntary standards have not been introduced for shea nuts, whereas elsewhere, they are

key drivers of the restructuring of value chains toward more direct sourcing of other commodities (Fold & Larsen, 2008; Gibbon & Ponte, 2005; Riisgaard, 2009). This is also the case in the cosmetic segment of the shea value chain where quality requirements have changed in line with the interests of branded manufacturers including L'Occitane, The Body Shop, and L'Oréal. Certification has become a way to differentiate products and justify premium prices. Branded manufacturers purchase shea butter directly from women's groups or work with manufacturers whose source of shea nuts is from women's groups. The organization of the value chain is experiencing rapid change. In the shea value chain for CBE, at the global scale, the leading firms have not changed, nor have their buyers or quality requirements. Shea is still completely invisible to consumers and is of little interest to the final buyers (branded manufacturers) (Fold, 2008). Thus, product differentiation according to origin or quality and certification has not been applied in the agri-food shea value chain.

The wholesalers' organization of the shea trade has proven useful, efficient, and stable because it resolves specific coordination problems and facilitates the development of horizontal coordination links. Still, one may question the longevity of such an organization. To what extent could the conditions that allow wholesalers to maintain control over the chain shift? Their organization has proved to be resilient up to now. So far, due to the shea tree ecology and the complexity of land and tree tenure, it is difficult to imagine industrial-scale plantations of shea trees will threaten the wholesalers' organization in the medium term. If changes do occur, they are more likely to affect the visibility of shea and certification and standards. Up to now, shea butter products are hidden behind the term "vegetable oils". By the end of 2014, the EU will require mandatory labeling of what type of vegetable oil is used in agro-food products. [11] Consequences for the shea agri-food value chain are difficult to foresee. If mandatory labeling implies stricter social and environmental requirements by the final buyers, it may also entail a shift in the organization of the shea value chain. Is the wholesalers' organization sufficiently resilient to support a change of this kind? Wholesalers are worried about the possible generalization of the model value chain developed by the cosmetics industry that bypasses them to directly empower women. Even though the generalization of this model to the entire shea value chain would be costly, our interviews showed that wholesalers are lobbying to maintain their positions in the future.

7. CONCLUSION

The globalization of the shea value chain has influenced both the volume and price of shea nut exports in the past fifteen years. However, the organization of the shea value chain at the regional level has been maintained. For more than 50 years, a handful of wholesalers have controlled the multilevel networks of local shea nut traders. We contend that international traders and manufacturers have not succeeded in gaining control over the upstream supply chain of shea nuts due to the inherent features of the shea nut supply. We have demonstrated that wholesalers may have survived the upheavals of the globalization process by being organized in a way that enables them to overcome the main coordination problems of the shea supply chain. Their prolonged existence relies on two forms of cooperation: vertical cooperation within each individual wholesaler's network and horizontal cooperation between wholesalers, the central nodes of the networks. The lack of efficient alternative organizations and the unchanged low quality requirements for shea nuts have also facilitated the maintenance of this organization.

From a development perspective, whereas the government and NGOs are focusing most of their actions on the women's groups who produce shea butter and on certification for niche markets (the cosmetics segment), the most important stakes in terms of development and poverty alleviation are in the raw shea nut chain for the agri-food market, where the producers are predominantly individual women members of the rural poor. This study provides development stakeholders with key insights into the structure and the governance of the shea value chain that targets agri-food industries. Our findings suggest that the traders who are situated between farmers and exporters cannot be simply seen as free riders. They are useful and relevant players in the shea value chain, and create value at both local and national levels. As a consequence, the role of wholesalers in the functioning of the chain and the empowerment of the rural poor needs to be reassessed. Industries and NGOs involved in the shea trade should consider traders and their political and social roles more carefully. Trying to bypass them even if with the laudable goal of empowering marginal social groups entails a risk of excluding other rural poor who rely on their income from shea.

From a theoretical point of view, this study contributes to the recent debates regarding governance of global value chains. The shea value chain is a counter-example of the trend toward more buyer-driven value chains. Although CBE manufacturers, in the role of leading firms, have controlled the manufacturing process and the downstream part of the value chain while controlling prices and margins, wholesalers have maintained a grip on the upstream shea value chain. This finding is significant because it shows that national upstream actors, such as traders, may be powerful when confronting transnational companies. The distinctive features and the specific coordination problems of the value chain help understand the organization of the chain. Our findings support the argument that the global value chain approach would gain from being better integrated in the transaction costs theory.

NOTES

1. Previously called Republic of Upper Volta, the country was renamed Burkina Faso in 1984 by President Thomas Sankara.

2. Archive document from the National Archive Center of Ouagadougou, class number 17V104: Letter from Bernard Drissa Boni, president of the central council of the OFCOM, to the heads of administrative constituencies, November 4, 1962.

3. Decree No 506/PRES/MFAEP/AE of December 28, 1960 on the organization of the OFCOM (*décret fixant l'organisation de l'office de commercialisation des produits de Haute-Volta*), and decree No. 081/PRES/CIM/DCI of February 4, 1964 creating the CSPPA (*décret portant création d'une Caisse de Stabilisation des Prix de la Haute-Volta*).

4. Archive document from the National Archive Center of Ouagadougou, class number 17V104: Letter from Bernard Drissa Boni, Minister of Trade, Industry, Economic Affairs and Mining, to divisional commanders, January 7, 1963.

5. Archive document from the National Archive Center of Ouagadougou, class number 17V104: Letter from B. Mathurin, head of administrative

constituency of Tanguin-Dassouri division of Ouagadougou, to the Minister of Trade, Industry and Mining, January 14, 1964.

6. Archive document from the National Archive Center of Ouagadougou, class number 31V113: Report by the select committee after examination of the report of the working group on agriculture and trade concerning problems related to the marketing of cash crops in Upper-Volta (*Compte-rendu de la commission restreinte d'examen du rapport du groupe de travail agriculture/commerce sur les problèmes liés à la commercialisation des produits de rente en Haute-Volta*), June 7, 1968.

7. Archive document from the National Archive Center of Ouagadougou, class number 1V477: Analysis of trade exchanges in Upper-Volta 1962–63–64 (*Analyse des échanges commerciaux de la Haute-Volta 1962–63–64*), undated.

8. The drivers of the crisis are uncertain. Archived data from the Sankara revolution have been destroyed. According to our interviews, it appears that several aspects may explain what happened. First, the government may have wanted to reallocate shea nuts stocked by forwarders as part of the self-sufficiency program. Several traders state that their stocks of nuts were requisitioned to supply national crushing plants. In addition, it seems likely that Sankara tried to impose better conditions on the national shea trade and that CBE manufacturers preferred to withdraw. Moreover, the last director of the CSPPA before the Sankara takeover told us that the CSPPA had held speculative stocks of shea nuts whereas prices fell in 1984–85. Finally, bad stocks of shea nuts were burnt in 1987 to restore buyer confidence.

9. Archive document from the National Archive Center of Ouagadougou, class number 11V91: Sub-regional workshop in Abidjan on the topic: 'Production, processing and industrial use of the shea nut value chain in the West African sub-region (*atelier sous régional à Abidjan sur le thème: production, transformation et valorisation industrielle de la filière amandes de karité dans la sous région ouest africaine*), 1995.

10. Aarhus United and Karlshamns AB were merged in 2005 to become AAK.

11. EU regulation no. 1169/2011 on vegetable oil labeling will apply from December 13, 2014.

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